

HAWAII STATE HEALTH PLANNING AND DEVELOPMENT AGENCY

EMERGENCY APPLICATION - CERTIFICATE OF NEED PROGRAM

Application Number 06-07E
Applicant: AIRMED HAWAII, LLC
1000 Urban Center Drive, #470
Birmingham, AL 35242
Phone: 205 443-4840

Project Title: Establishment of fixed wing ambulance service

Project Address: 90 Nakolo Place, Honolulu, HI

1.	TYPE OF ORGANIZATION: (Please check all applicable)	
	Public X Private Non-profit For-profit Individual Corporation Partnership Limited Liability Corporation (LLC) Limited Liability Partnership (LLP) Other:	31
2.	PROJECT LOCATION INFORMATION	
	A. Primary Service Area(s) of Project: (please check all applicable)	
	Statewide: O`ahu-wide: Honolulu: Windward O`ahu: West O`ahu: Maui County: Kaua`i County: Hawai`i County:	
3.	DOCUMENTATION (Please attach the following to your application form):	
	A. Site Control documentation (e.g. lease/purchase agreement, DROA agreement letter of intent). See Attachment 1. B. A listing of all other permits or approvals from other government bodies (federate, county) that will be required before this proposal can be implemented.	al.

- (such as building permit, land use permit, etc.) EMS Ambulance License.C. Your governing body: list by names, titles and address/phone numbers. See Attachment 2.
- D. If you have filed a Certificate of Need Application this current calendar year, you may skip the four items listed below. All others, please provide the following:
 - Articles of Incorporation
 - By-Laws
 - Partnership Agreements
 - Tax Key Number (project's location) N/A

See Attachments 3 (Articles of Organization of LLC) and 4 (Letter of Commitment from AirMed International to AirMed Hawaii, LLC).

4. TYPE OF PROJECT. This section helps our reviewers understand what type of project you are proposing. Please place an "x" in the appropriate box.

	Used Medical Equipment (over \$400,000)	New/Upgraded Medical Equip. (over \$1 million) APR -3 A8 1	Other Capital Project (over \$4 Amillion)	Change in Service	Change in Beds
Inpatient Facility		1			
Outpatient Facility		ST. HLTH. PLINGY & DEV. AGENCY	,	X	
Private Practice					

5. BED CHANGES. Please complete this chart only if your project deals with a change in your bed count and/or licensed types. Again, this chart is intended to help our reviewers understand at a glance what your project would like to accomplish. Under the heading "Type of Bed," please use only the categories listed in the certificate of need rules.

Type of Bed	Current Bed Total	Proposed Beds for your Project	Total Combined Beds if your Project is Approved
N/A			
TOTAL			

6.		CT COSTS AND SOURCES OF FUNDS	
	A. List	All Project Costs: RECEIVED	AMOUNT:
	1.	Land Acquisition APR -7 P2:06	
	2.	Construction Contract	
	3.	Fixed Equipment Medical Africa	\$50,000
	4.	Movable Equipment	
	5.	Financing Costs	
	6.	Fair Market Value of assets acquired by lease, rent, donation, etc. King Air 90 X 2 Paid by lease payments	\$1,600,000
	7.	Other:	
		TOTAL PROJECT COST:	<u>\$1,650,000</u>
	B. Sou	rce of Funds	
	1.	Cash State Appropriations	\$50,000
	2.	State Appropriations	
	3.	Other Grants	
	4 .	Fund Drive	
	5.	Debt	
	6.	Other: fair market value of 2 leased aircraft	\$1,600,000
		TOTAL SOURCE OF FUNDS:	\$1,650,000

7. CHANGE OF SERVICE: If you are proposing a change in service, then please briefly list what services will be added/modified. Be sure to include the establishment of a new service or the addition of a new location of an existing service. Please reference the Certificate of Need Rules Section 11-186-5 for the categories of services. If you are unable to determine which category best describes your project, please consult with agency staff.

Establishment of fixed wing air ambulance

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- 8. **IMPLEMENTATION SCHEDULE:** Please present a projected time schedule for the completion of this project from start to finish. Include all of the following items that are applicable to your project:
 - a) Date of site control for the proposed project, N/A
 - b) Dates by which other government approvals/permits will be applied for and received, **April 7, 2006**
 - c) Dates by which financing is assured for the project, N/A
 - d) Date construction will commence, N/A
 - e) Length of construction period, N/A
 - f) Date of completion of the project, N/A
 - g) Date of commencement of operation see attached implementation schedule

Please remember that the Agency does monitor the implementation of Certificates approved. Non-implementation of a project as described in your application may result in a fine and/or withdrawal of the certificate of need.

- 9. EXECUTIVE SUMMARY: Please present a brief summary of your project. In addition, provide a description of how your project meets each of the certificate of need criteria listed below. If a new location is proposed, please attach an easy to read map that shows your project site.
 - a) Relationship to the Hawai'i Health Performance Plan (H2P2), also known as the State of Hawai'i Health Services and Facilities Plan.
 - b) Need and Accessibility
 - c) Quality of Service/Care
 - d) Cost and Finances (include revenue/cost projections for the first and third year of operation)
 - e) Relationship to the existing health care system
 - f) Availability of Resources.

10.		y to file for Administrative Emergency Review. This project is of file for Administrative review because: (Check all applicable)
		It involves bed changes, which will have a capital expense of \$1,000,000 or less, and which will have an increased annual operating expense of less than \$500,000.
		It involves service changes which will have a capital expense of \$1,000,000 or less, and which will have an increased annual operating expense of less than \$500,000.
		It is an acquisition of a health care facility or service, which will result in lower annual operating expenses for that facility, or service.
	<u> </u>	It is a change of ownership, where the change is from one entity to another substantially related entity.
		It is an additional location of an existing service or facility.
	-	The applicant believes it will not have a significant impact on the health care system.
	X	Emergency Situation Exists as per HAR Sec. 11-186-99. The State's only current provider is not operational, and even should it become operational will have limited capacity, which state of affairs involves an actual substantial injury to public health and/or a clear and present danger of such an injury occurring.
	RECEIVED	ested that this Emergency CON be granted for a minimum of two years from the date of issuance. EL HITH SENT A SEN

IMPLEMENTATION SCHEDULE

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Day 1: Approval of Emergency CON

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Day 2: Interim Aircraft arrives in Honolulu (Long Range multi-patient Jet)

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Day 3: Nurse & Paramedic Safety Training & Orientation Completed

Day 4: Inter-Island patient transports begin:

Day 7: 2 Prop-Jet Aircraft (King Air) begin conversion from passenger configuration to air ambulance

Day 8: Initial flight crews become salaried employees & begin simulator training in Wichita

Day 9: Initial Medical crews become salaries employees

Day 21: 1 dedicated King Air arrives in Honolulu

Day 22: Crew orientation to King Airs

Day 24: Inter-Island service commences with 1 King Air

Day 30: Review of month 1 activities with SHPDA & local leaders.

Day 45: 2nd King Air arrives.

Day 48: 2nd King Air becomes operational. Long Range Jet returns to Birmingham.

Executive Summary Of

AirMed Hawai'i Certificate of Need Application

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Overview of Emergency Application

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It is imminently clear that the there currently exists a state of emergency with regard to interisland air ambulance transportation in the State of Hawaii and that this situation results every day in actual substantial injury to public health and/or a clear and present danger of such injury occurring. HAR Sec. 11-186-99. The State's only fixed-wing air ambulance provider has not been operational at all since March 8, 2006 – the date of a tragic fatal crash on Maui, its second such fatal crash in two years. The Coast Guard, with indications that this is temporary and will not continue, has provided very limited capability. For a time the Maui helicopter was assisting with critical inter-island transfers – though clearly the helicopter program was implemented to cover mostly site and scene calls — but due to an engine problem, even that resource is currently unavailable (3/29).

Furthermore, even if Hawaii Air Ambulance regains some capacity, it clearly will not be sufficient to meet the State's current needs and the clear and present danger to public safety danger will continue unless an emergency certificate of need is granted. Physicians, nurses, paramedics and other providers throughout the State have submitted evidence to support that an emergency exists and has existed for some time (see attached Exhibit 1). Among the more notable comments are the following:

"As a cardiologist at Maui Memorial Medical Center, I see first hand the need for this transportation service and feel that the current situation may lead to avoidable deaths and disability of the residents and visitors to Maui County."

James Muto, MD, FACP Vice Chief of the Department of Cardiology Maui Memorial Medical Center

"An emergency CON is critical to the patients we care for in Maui County." It is our opinion that there is a 'a state of affairs involving an actual substantial injury to public health or where there is a clear and present danger of such injury occurring.' The Coast Guard is not able to provide this level of service."

Jeffrey A. Trager, D.O. Chairman, Department of Emergency Medicine Maui Memorial Medical Center "The current unavailability of Hawaii Air Ambulance to provide interisland air ambulance services has created a crisis situation and brings into sharp focus the inadequacy of relying on a single carrier to supply Hawaii's interisland medical transport needs.

"Even prior to current unavailability of Hawaii Air Ambulance, however, long delays in inter-island air transports were the norm because of high demand relative to available air transport resources.

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"We believe the current circumstance whereby inter-island medical air transport service is provided only by the United States Coast Guard presents a clear and present danger where a substantial injury to public health may occur and compromises the level of care available to the citizens of Hawaii.

"We further believe the entry of additional inter-island medical air transport service companies would serve to mitigate the dangers described above and improve the availability of care in Hawaii."

Sincerely,

Martha Smith
Kenneth Ash
Mavis Nikaido
Wendell Inouye
Laura Bonilla
The Kapi'olani Pediatric Neonatal Transport Team

"It is our opinion that the current air ambulance system has been problematic, unreliable and often unavailable or detained for long periods of time. According to Emergency Medical Director, Dr. David Nelson at the January Aeromedical Performance Improvement (P.I.) committee meeting it was noted that there were 5 ½ hour waits on average. This included a 5½ hour wait for a patient with an acute M.I. who needed an emergency angioplasty, a very dangerous situation indeed.

"This was the situation even before the latest crisis and the additional attendant problems with securing aircraft and medical personnel. We believe that there is and has been a state of affairs involving actual substantial injury to the public health and/or a clear and present danger of such injury occurring."

Sharlee Dieguez, Regional Director Med Hawaii Inc.- EmCare It is important to note that a state of emergency exists not only because of the most recent airplane crash, but also because of a chronic lack of capacity, which existed before the crash and which will continue, even if and when Hawaii Air Ambulance resumes operations. An independent evaluation for the State of Hawaii conducted in October 2005 by the American College of Surgeons (ACS) Committee on Trauma (see Exhibit 2), which organization sets nationally recognized standards for trauma care, specifically noted:

"The rapid transport of more severely injured patients to Queen's Medical Center [the State's "single large Level II designated center"] is often problematic due to limited air medical transportation resources relative to increasing demands on the transportation system. Physician availability for the care of trauma patients is lacking or inconsistent in some areas in the state and for some specialties (e.g orthopedics, neurosurgery), increasing the demand for interfacility transfer " Exhibit 2 at pp. 8-9.

The report by ACS last October further strongly recommended strengthening the air medical transport resources throughout the state, bluntly noting that "[t]he geography of the state mandates that air medical transport capabilities for both primary field response and interfacility (intra-island and inter-island) transfers are critical to ensure appropriate access of care for all citizens and visitors of the state." Exhibit 2 at p. 47 (emphasis added). While the ACS team noted the imperative need for a trauma system that could "ensure that inter-facility transfers occur in a timely fashion commensurate with the patient's clinical needs," they found that a system was not being provided, stating: "Many individuals interviewed by the site review team were concerned about long delays in trauma patient transport related to inadequacies in the current fixed-wing transport system." And the ACS found one of the leading causes of this inadequacy was "lack of adequate numbers of aircraft and/or air crews." Exhibit 2 at pp. 62-63 (emphasis added).

The inadequacy of coverage is clear. In 1980 two air ambulance providers were licensed by the State of Hawaii and between them they had three aircraft in operation. At that time there were approximately 20 flights per month. Some 26 years later, with call volume averaging over 200 flights per month, Hawaii Air Ambulance – even when "fully" operational – at best only has three aircraft to meet a 10-fold increase in volume. Because the Cessna aircraft used by Hawaii Air Ambulance require significant maintenance phase checks every 50 hours, it is often the case that one or more of the three remaining aircraft are down for maintenance, leaving two or sometimes only one aircraft to cover the entire state.

These simple numbers demonstrate not only the complete inadequacy of coverage and resulting state of emergency which every day needlessly endangers lives in Hawaii, but also demonstrate the utter folly of the any argument that there is not currently room for more than one fixed wing air ambulance operator in the state.

Moreover, staffing at Hawaii Air Ambulance is also woefully inadequate, as demonstrated by the letter to SHPDA from one courageous flight paramedic at HAA, who recently wrote:

A 4th aircraft has not been operational for at least 6 months to one year and, even if it were added, the operational capacity would still be woefully inadequate for the needs of the state.

"I would like to share some information with you that would perhaps help you make a more informed decision. I may lose my job for this, but I am a clinician and I believe the people of Hawaii are more important than my current employment. Prior to this recent accident which had claimed the lives of Peter, Brian and Marlena, we were already outgunned by the needs of the community. Now, since then, we cannot perform our mission goals. Two of our aircraft have just recently, been released by a third party inspection with recommendations that may take one to several weeks before they are airworthy and can be put back in service per the FAA. We only have 4 fulltime pilots and 1 part-time pilot left to fly the aircraft, 3 in Honolulu, 2 in Hilo. The rest resigned. Myself and another MICT are the only fulltime flight Paramedics left in Honolulu, with one part-timer left to spare. All of the rest of the part-time/fulltime/per diem medics have resigned. . . . We only have one fulltime Flight Nurse, along with our Chief Flight Nurse (CFN). . . .

"The legs of our operation have been 'cut off'. We are crippled,"

Lawrence J. "Boogie" Molina, NREMT-P, CCEMT-P

The proposal by AirMed Hawaii, LLC ("AirMed") will help to address the current state of emergency with regard to fixed wing air ambulance transport in Hawaii. If granted a CON, AirMed will take the following steps:

- Immediately bring a long-range multi-patient medically equipped jet to Hawaii to begin operations.
- · Bring two medically equipped King Air prop-jet aircraft to Hawaii to continue service - the 1st King Air to arrive within 21 days and the 2nd to arrive within 45 days.

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SECTION 展 RELATION TO THE STATE PLAN CRITERION

Relation to the H2P2

Goal: Increase the span of healthy life for residents.

In order to achieve the Hawai'i Health Performance Plan (H2P2) goal to "increase the span of life for Hawai'i's residents" access to specialized services and facilities must be available to all the

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provided in a timely manner to achieve the most favorable health care outcomes. Currently there are limited numbers of Critical Care Unit (CCU) beds, and no high-risk obstetric, Pediatric ICU (PICU) or Neonatal ICU (NICU) beds on the neighbor islands for specialized care (see Exhibit 3). The tertiary care/specialty centers and services for the residents of Hawai'i are located in O'ahu, predominantly in metropolitan Honolulu. The State Health Planning and Development Agency (SHPDA) Council Member Orientation Manual 2004 in describing Medical Services recognizes that these highly specialized services are used by a small percentage of the population. In addition, "Because of the complexity, cost, and/or relatively low levels of utilization, these services must be planned for use by a population base covering more than a neighborhood, county or island." Regionalization of tertiary health care is appropriate and common to all states for reasons of cost, utilization, and quality care. However, timely access to these services when required by those who do not reside on the island of O'ahu or near Honolulu is restrictive due to insufficient fixed-wing air medical transportation.

Currently, there is only one provider for fixed-wing air ambulance transport in the state of Hawai'i, Hawaii Air Ambulance, Inc., which is not operational. However, even when and if HAA becomes operational, current data indicates that the "demand" for timely, safe, high quality, and efficient fixed-wing air medical transportation of neighbor island residents and visitors to tertiary care centers on O'ahu by far exceed the "supply" of this vital service, resulting in a state of emergency which results every day in actual substantial injury to public health and/or a clear and present danger of such injury occurring HAR Sec. 11-186-99.

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AirMed Hawaii LLC proposes to add aircraft to increase the "supply" and thereby provide timely access to tertiary health care.

- Goal: Reduce health disparities among Hawai'i's residents.
- Goal: Achieve equitable and effective access at reasonable cost for all Hawai'i's residents to health services that are responsive to the holistic needs of the community's members.

Due to Hawai'i's small population and unique geographical barriers as an island state, there is a relative health disparity between the residents of the neighbor islands and residents of O'ahu as it relates to tertiary care. Equitable and timely access to these services when required by those who do not reside on O'ahu is restrictive due to lack of transportation resources.

Objective: Promoting successful birth outcomes.

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Successful birth outcomes are due in part to appropriate prenatal management of pregnant women, particularly those with high-risk or complicated pregnancies. Not all islands have designated obstetric beds available (refer to Exhibit 3), however, the specialized services and facilities to manage and care for the small population of high-risk/complicated OB patients are centralized in O'ahu. Timely access to these services by neighbor island residents can only be achieved via fixed-wing air ambulance.

ST. HLTH. FLIB & DEV. AGENO The proposal will support the objective of promoting successful birth outcomes of both the mother and neonate by providing timely, operationally effective, safe, and high quality fixed-wing air ambulance transport to meet the current and future communities needs.

Objective: Early detecting and diagnosing of treatable diseases.

Diagnosis of medical conditions and diseases is most often accomplished by a combination of methods including diagnostic studies. Exhibit 4 presents the location and number of diagnostic/treatment devices on the neighbor islands. Computerized tomography (CT) is not available on Lana`i, nor is there Magnetic Resonance Imaging (MRI) on Lana`i, or Moloka`i. There is only one (1) cardiac catheterization lab located outside of O`ahu. Due to the high cost and low utilization of sophisticated diagnostic and therapeutic equipment, these services are again primarily located in O`ahu, e.g., specialized cardiac catheterization lab, positron emission tomography (PET scan), etc.

The proposal will support achieving this objective by providing timely, operationally effective, safe, and high quality fixed-wing air ambulance transport to meet the current and future communities needs.

 Reducing morbidity and pain through timely and appropriate treatment.

In order to reduce the morbidity and pain of illness or injury, appropriate treatment must be provided in a timely manner in the most appropriate facility. As described earlier, access to tertiary facilities and treatment is dependent on fixed-wing air ambulance transport. In many instances, the length of time to definitive tertiary care is critical in order to minimize potential death and morbidity.

The proposal will support the objective of reducing morbidity and pain by providing timely, operationally effective, safe, and high quality fixed-wing air ambulance transport to meet the current and future communities needs.

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*06 APR -3 AS TEstablishing regionalized health care delivery systems that include community input, are cost effective, and foster improved access to ST. HEAR. TENG quality health care services.

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The proposal will support the objective of establishing a health care delivery system by improving access to quality health care services in a cost-effective manner. Members of the medical community strongly support additional fixed-wing air ambulance resources in order to improve the transfer of their patients in a timely fashion.

The proposal will support achievement of the H2P2 goals and objectives by adhering to the principles for a health delivery system; a system that "is comprehensive, cost-effective, well coordinated and responsive to community/regional needs". The primary focus of the proposed service will be to provide all the residents and visitors to the State the ability to receive care in the facility that will meet their health care needs in a safe and timely fashion.

In some instances fixed-wing air ambulance transport of the patient may be from a primary or long term care facility to a neighbor island's secondary care facility that is capable of managing "more complex health care functions that are specialized beyond basic primary care". Based on the published data from the current air ambulance provider. the majority of patient transports will be from the neighbor islands to the tertiary and specialty hospitals located on O'ahu (see Exhibits 5) As stated in the H2P2 (II-2) "The most complex health problems require highly skilled practitioners who perform specialized procedures on a routine and frequent basis so that they may maintain the skill levels necessary to ensure good quality care. A tertiary care center is where these specialized practitioners are concentrated to serve the community." The plan acknowledges that in order to maintain good quality and cost-effective tertiary care the services must be shared among the regions. The H2P2 (II-2) goes on to state "...that one such service or facility may even need to be shared by the entire State in order to have effective utilization and thereby have good quality care occur".

 AirMed Hawai'i strongly believes in the development of "collaborative relationships between local, regional, and state health care providers" RECEIVED

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ST. HLTH, PLHG & DEV. AGENCY (II-3). This H2P2 characteristic of a health care delivery system is not only desirable, but also an essential component. The applicant intends to implement a statewide effort focused on educating healthcare providers in the pre-hospital and the acute care setting about the service capabilities of our program. Following this initial introduction and education, the administrative team will maintain contact with the providers in these settings in order to receive feedback and input regarding the services provided to meet the needs of the population served. AirMed Hawai'i will also establish and maintain a close relationship with the State Emergency Medical Services under the auspices of the Hawai'i State Department of Health. Our organization will fully support the State EMS System Mission by becoming an integral healthcare provider in the "...fully integrated cohesive network of related components".

 The H2P2 characteristic of a health care delivery system that incorporates the input from the community in health planning processes is extremely valuable in order to meet the health care needs of the residents and visitors to the state of Hawai'i. This is apparent by the establishment of SHPDA and the statewide and subarea councils by the State legislature in 1974.

AirMed Hawai`i also supports and will value the input of persons of various interests representing multiple geographical areas of the State. The applicant will become involved in the state and subarea health planning activities to ensure that the healthcare needs of the residents and visitors using our service are based on the needs of each community.

- In order to determine the success of our program within the health care delivery system evaluation must occur. AirMed Hawai'i fully recognizes the value and necessity of the H2P2 care delivery system characteristic of "performance outcomes for evaluation and planning for health services" (II-3). AirMed Hawai'i will implement a performance-monitoring program (Continuous Quality Improvement CQI) in order to identify opportunities for improvement in operational and clinical practices. Our model for the program will be based on the long-standing and successful model currently in place for it's sister company, AirMed International. Appropriate modifications will be made to fit the unique features of the proposal and characteristics of this State.
- Access

The primary purpose of the proposal is to ensure that all the residents and visitors of Hawai'i have equitable access to health care services that are critical to the continuum of care. In Chapter 1 the H2P2 speaks to The State's unique geographical barriers. "The State of Hawai'i is made up of seven inhabited, and one uninhabited, principal islands". It also states, "people transportation between islands for business, recreation, and health care is almost entirely by air". In addition to water barriers, "approximately 90 percent of The State's 6,423.4 square miles of land area is designated rural". "The rural nature of the islands combined with mountainous topography contributes to isolation not only between the islands, but also between communities on the same island".

Fixed-wing air ambulance transport is the safest, most efficient, and cost-effective mode of transportation for inter-facility transfers for tertiary care. The proposal will help improve access to necessary health care and improve the development and allocation of health resources based on the needs of the population.

Quality Management

AirMed Hawai'i will implement a performance monitoring program whose design will be unique to the proposal and the populations served. To promote accountability we will establish and regularly communicate with the multiple health care delivery constituents' information regarding outcomes and measures of quality as compared to standards and expectations. We are also committed to providing service that is professional and founded on ethical practices.

The program will also have a component that considers the patient preferences and level of satisfaction as a method of determining health outcomes. Health services and organizations are now expected to provide value to all their constituents and to the community they serve. The proposal will utilize the performance indicators to determine it's continued value, which is "...the product of the interrelationship of quality, cost, and efficacy...".

Cost-Effectiveness

Health care is Hawai'i's "second largest industry." As such, the limited health care resources of the State must be allocated to the most cost-effective and necessary services. Our organization is cognizant of the high cost of health care and the necessity of providing quality care at a reasonable cost. The proposal has been

designed to incorporate this key element of the delivery system as a core component within the program. Company resources and management oversight will be provided to ensure that the most cost effective method of care is delivered while maintaining the highest standards of care.

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APR -3 As documented in the H2P2 (II-4) the continuity of the patient's care should be seamless—the patient should receive "... the right care, at should be right time in the right setting." The primary goal of the proposal is to ensure the continuity of patient care, particularly when the services required can only be provided in a tertiary or specialized facility.

It was recognized in the Report to the Fifteenth Legislature State of Hawaii 1990 (Senate Resolution No. 116, S.D. 1) in the Executive Summary of the Sate of Hawaii Aeromedical System Plan that the current provider of fixed-wing aeromedical service could not respond "... to medical missions in a timely manner." The summary further stated that "These delays in aeromedical response to the neighbor islands are a major concern to health care providers who rely on the transportation of high-risk patients to tertiary medical centers in Honolulu." The Executive Summary of the Report to the Twentieth Legislature State of Hawai'i 1999—State Department of Health's Strategic Plan and Progress Report on the Development of a Statewide Emergency Aeromedical System reported that the current aeromedical system did not meet the current performance measurement standard for head injury set by the American College of Surgeons. The report on the Assessment of Current Inter-Island Aeromedical System further stated that "A delay in any on of the Aeromedical System components negatively effects the timely transport of a seriously ill or injured patient to an appropriate tertiary medical facility required to optimize outcome."

Trauma System Consultation, State of Hawaii by The American College of Surgeons Committee on Trauma (10/05) (Exhibit 2) reports "Many individuals interviewed by the site review team were concerned about the long delays in trauma patient transport related to inadequacies in the current fixed wing transport system. System delays appear to be related to several factors. These include: variable patient volume, lack of adequate numbers of aircraft and/or air crews, and competition between transferring hospitals and doctors to have their patients transported in a timely manner for time-sensitive injuries or illnesses."

Through collaboration and coordination with the health care system providers (locally, regional and sate), and the State Emergency Medical Services/Department of Health, AirMed Hawai'i will be able to fill the current gap in service by providing the necessary resources to meet the standard for the delivery of care, "at the right time."

RECEIVE Meeting this standard is often a critical step in the continuum of care in order to achieve the best possible patient outcomes.

'06 APR -3 A8:17 Constituent Participation

ST. HLTH. The Hawai'i legislature recognized the need for citizen input when SHPDA and its Councils were established in 1974. The preamble to Act 152, SLH 1976 Section 1., (as documented in the SHPDA Council Members Orientation Manual 2002) makes clear that "The legislature finds that health planning for the State is a complex area, and requires the input of person's of various interests and representing various geographical areas. The process of planning must seek to best meet the health needs of the State, as perceived by the residents of the State, who clearly, depending upon the community of residence, perceive different needs."

AirMed Hawai'i also acknowledges the importance of citizen input into the health planning process to ensure that the total health services plan of the State will be based on informed decision making. In fact, the impetus for this proposal originated from concerned health care providers and was designed to improve access to the recognized health care needs. The organization will welcome and seek the input of local, regional and State representatives so that we may remain responsive to community needs and industry standards.

Statewide Priorities

The proposal supports several of the recommended statewide priorities for modifying the health care delivery system in the State of Hawai'i.

2. a. Speaks to the need to "...increase access to cost-effective health care services." The proposal would improve the access to specialty and tertiary care in a timely manner that could potentially reduce the overall health care costs for each hospitalization (reduced possibility of complications from delay in definitive care). This priority also focuses on "...early intervention target especially the areas of heart disease/stroke, cancer and diabetes." The current data clearly illustrates utilization of air ambulance service by those individuals with these conditions, especially heart disease (see Exhibit 6). The eventual health care outcome may be impacted negatively if access to the appropriate facility is delayed. The proposal will improve access of this

population to the most appropriate facility to meet their special health care needs.

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2.b. Addresses "...the development of care delivery systems for the elderly and chronically ill populations to provide effective management of their health..."The proposal would serve as an integral part of the delivery system for this population, and assist them in receiving the health care management in specialty facilities when needed. In fact, the need for the proposed service for the elderly will almost inevitably be required more frequently in the future. The State Health Policy Guidebook 2002 developed by SHPDA presented "An Aging Population" as an emerging trend issue to the legislature. It states "Hawai'i's elderly population is growing rapidly. Elderly use more, and more sophisticated, health care services as they age and recent health care cost trends indicate the use of these services is increasing dramatically. "Hawai'i can expect to see even greater increases in health care costs as our Baby Boomers enter into their next decade." The proposal would not only assist in filling the current gap in air ambulance service, but also support the future needs of the State's elderly residents who require access to sophisticated health care services. Unfortunately, there is no publicly accessible current or past data published to reflect the exact age of the patients transported by air ambulance. However, AirMed Hawai'i recognizes the elderly residents on Medicare will make up approximately forty percent of those transported.

2.f. Promotes "...enhanced health care networks to ensure access to comprehensive medical care statewide... "The proposal seeks to improve access to the health care network statewide. The comprehensive design of the proposal will support the continuum of care through integration, collaboration, and coordination with the State's current health care system.

Statewide Values: AirMed Hawai'i fully supports the H2P2 values—accountability, compassion, comprehensiveness, and community. The proposal has been designed to the greatest extent possible to be consistent with the values identified. The organization will incorporate these core values into the day-to-day operation of the service to ensure that our program is responsive, accessible and a cost-effective provider within the health care system.

Regional Priorities

Kaua`i County Subarea

The proposal supports several of the priorities identified by the Kaua`i County Subarea Health Planning Council and Garden Island Health Planning Committee (GIHPC).

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- 2.b. Documents the priority to provide "Comprehensive Care...which address the full continuum of care..."The proposal will assist in achieving this level of care by enhancing the resident's ability to access specialty services and tertiary care not currently available in the county. Exhibit 5 reflects the utilization of air ambulance service by the health care facilities in the State's counties by the current provider during 2003. Four hundred and sixty four (464) residents or visitors in Kaua'l county required inter facility transport. This number represented 19.6 percent of the total transports in 2003, the third highest county utilization rate.
- 2.c. Speaks to services that are "Culturally Relevant and User Friendly." AirMed Hawai'i understands the need to address and respect the cultural diversity of the county residents and provide the service in a "barrier free" manner. The organization will seek to establish cultural sensitivity among its personnel and demonstrate "...respect for the unique values, rituals and social contributions of all cultures." ("Kaua'i County value") The proposal also includes a method to evaluate the service provided and make adjustments to meet or exceed the customer's expectations.
- 2.d. The priority of "Focus on Patient and Family" targets the services needed by the patient and family. The proposal supports this priority by providing vital air ambulance service when specialty and tertiary care is needed. The Kaua'i value to "Access to Health Care" is also shared by our organization and the central focus of the proposal.
- 2.e. Addresses "Access for Those with Inability to Pay" for health care services. AirMed Hawai'i will provide the services to those in need regardless of their ability to pay or method of payment.
- 2.f. The proposal will respond to the "Prevention and Early Intervention" priority with a focus on early intervention. Time sensitive illnesses or injuries that require specialized care and early treatment can best be provided in tertiary care facilities. The proposal will assist in ensuring that early intervention is provided to the residents and visitors within the most appropriate time frame.

The proposal has been designed to the greatest extent possible to be consistent with the additional values identified by the Kaua'i County Subarea Health Planning Council which were not directly mentioned above. AirMed Hawai'i has a great appreciation for these attributes

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within the regional health care system and will strive to incorporate them into the daily operation of them into the daily operation of the program.

Maui County "Tri-Isle" (Maui, Moloka`i, Lana`i) Subarea

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2.b. Addresses "Emergency Medical Services" in Maui County, specifically the critical need for Aeromedical (helicopter) emergency transport. Fixed-wing air ambulances are not considered *prehospital emergency responders* as are ground and helicopter ambulances. In the event of an emergency, care is provided at the scene and during transport by prehospital responders. Continued treatment and care is generally provided at the closest local acute care facility. In most instances, if the resident needs further definitive treatment in a specialty or tertiary care setting, the fixed-wing air ambulance performs the inter-island/facility transport. Exhibit 5 reflects in all the State's counties by the current provider during 2003. Five hundred and forty four (544) residents or visitors in Maui County required inter-facility transport. This number represented 22.95 percent of the total transports in 2003, the second highest county utilization rate.

The proposal will support the priority through the EMS System by assisting with the provision of timely access to fixed-wing ambulance service to the specialty and tertiary care centers on O`ahu. The organization will collaborate with all stakeholders within the county and statewide health care system to ensure the best possible patient outcomes in an "effective, efficient, and caring manner." (Maui County values).

2.f. The "Other Priorities" of "Obstetrics/Medical Facilities for Obstetrics on Lana'i and Open Heart Surgery" are currently defined as perceived gaps in service. The proposal would assist in the process of access to these services not available on the islands of Maui County which also corresponds with the essential value "Accessible/Easy Access."

The proposal has been designed to the greatest extent possible to be consistent with additional values identified by the Tri-Isle Subarea Health Planning Council that were not directly mentioned above. AirMed Hawai'i has a great appreciation for these attributes to ensure a comprehensive, responsive, accessible and cost-effective quality regional health care system and will incorporate them into the daily operation of the program.

Hawai`i County (Big Island) Subarea

Hawai`i County (Big Island) Subarea

3. Perceived Gaps in Services and Number 4. Critical and Essential Services

"Specialty services and Specialty Care" have been identified as both a gap in service and a critical service respectively. An additional critical and essential specialty service similar in nature, "Level I Trauma" care, was also recognized as a service that must be "...accessible and affordable to all" on the Big Island. These services and level of care not currently available in Hawai'i County can only be found in the specialty and tertiary care centers on O'ahu. Access to these services is by fixed-wing air ambulance. Exhibit 5 reflects the utilization of air ambulance service by the health care facilities in all the State's counties by the current provider during 2003. Nine hundred and eighty residents or visitors in the county required inter-facility transport. This number represented 41.34 percent of the total transports in 2003, and constitutes the highest county utilization rate.

One of the essential values identified by the Hawai'i Subarea Council is healthcare that is "Accessible/Affordable/Timely". This would logically hold true for all acute care facilities on the neighbor islands. Air transport that is accessible and timely is essential to ensure that the health care needs of the patients are met, and the best possible patient outcomes achieved. The average flight time from Honolulu to the major airports on the Big Island are from one (1) hour to one (1) hour and ten (10) minutes (the preferred Air Traffic Control routing). For comparative purposes, Exhibit 7 documents the average call times by the current provider of air ambulance service during the first seven (7) months in 2003 and 2004 for each acute care facility on the neighbor islands. For example; the average call time to Hilo Medical Center in 2003 was two (2) hours and fifty (50) minutes. For the same time period in 2004 the call time was four (4) hours and fifty-nine (59) minutes, an 80% increase.

The proposal will assist in filling the gap by providing timely access to fixed-wing ambulance service to the specialty and tertiary care centers on O'ahu. AirMed Hawai'i will "collaborate" with all stakeholders within the county and statewide health care system to ensure the best possible patient outcomes in a "safe and cost-effective" manner. ("Hawai'i County value").

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SECTION B: NEED AND ACCESSIBILITY

Please refer to Overview of Emergency Application for further information about the current emergency situation, which will not be resolved even when and if the current provider begins to be become operational.

- A. The proposed service area will cover the entire state of Hawai'i, especially the neighbor islands. The unique geographic features of the State severely restrict residents access to the tertiary and specialty facilities in O'ahu. The safest (in terms of patient care and mode of transport), most efficient and cost-effective method of interfacility transport in Hawai'i is by fixed-wing air ambulance.
- B. The proposal will target patients who have diagnostic and/or therapeutic needs which cannot be met at the referring hospital. Due to the few number of specialty practitioners outside O`ahu and regionalization of services, the majority of the target population will come from the neighbor islands. The service will cover the entire age spectrum from the newborn to geriatric, and address seven of the eight targeted diseases and health conditions.

2. Estimates of Need, Demand and Supply

A. As cited in the Position Paper by the National Association of EMS Physicians (NAEMSP) entitled *Medical Direction of Interfacility Transports*, "The transfer of patients between facilities is a fundamental component of the health care system. It allows access to various levels of care for individuals and communities that may not otherwise have access to such care. The ability to transfer patients between facilities is crucial to society as a whole because it potentially prevents needless duplication of services and decreases cost in the system. It facilitates the existence of an integrated health care system..." Interfacility transport was identified as one of the 15 essential components of EMS design in the early 1980's and continues to remain a critical link in the continuum of care. For the purposes of this document, an interfacility transport is not only defined as the movement of a patient from one hospital to another hospital, but may include urgent care centers, long term care facilities, or a patient's home.

To estimate the area wide need and demand for the proposed fixed-wing air ambulance service two primary sources were utilized, 1) the Hawaii Air Ambulance, Inc. executive summaries published in the Annual Report, 2003 and the HAA 2004 Executive Summary Monthly Reports from January through July, and 2) the monthly HAA transport reports/logs provided by Maui Memorial Medical Center during December 2003, and the 2004 reports from January through April. No other data was compiled and/or obtained from other facilities,

so the assumption was made that Maui Memorial Medical Center was a good example of what other facilities experienced. The methodology used was a detailed review of transport data reports from both sources (mathematical computations of sums, averages and percentages).

Hawai`i Air Ambulance

Exhibit 6 represents the area wide need during the defined time period for interfacility transport. The <u>need</u> to transfer is based on reported "Number of Calls by Diagnosis". These broad categories represent multiple illnesses and conditions of patient's who were unable to receive the necessary diagnostic or therapeutic treatment in the referring facility.

Need for Transport

Diagnoses	2003 (JAN-DEC)	2004 (JAN-JUL)
Heart Dz.	38.7%	36.7%
Heart-	37.1%	25.7%
Stroke	1.6%	1.1%
Medical/Surgical	25.7%	26.6%
Injury	13.5%	14.2%
MIC	12.8%	13.2%
Behavioral	5.3%	6.2%
Infectious Dz.	2.5%	ഉംഗ 2.6% 🏂
Cancer	1.4%	完 0.5%

Exhibit 8 and Exhibit 9 represents the area wide demand for interfacility transport from all facilities listed in the reports. These data are summarized below. The aggregate data were calculated from each monthly report.

Demand for Transport

	2003 (JAN-DEC)
Total Transports:	2451
2003 Peak Times of Day Request Received:	0800 - 2000
2003 Peak Days of Week:	Tues., Wed., Thurs.

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There have been a number of reported cases by physicians for detrimental patient outcomes caused by delays. For example, Dr. Dave Nelson an E.R. physician on Maui reported the case of a patient whose M.I. became "permanent," due to a 5.5 hr. wait for air ambulance transfer, which he termed a "preventable substantial injury" (see letter from Dr. Nelson includes as part of Exhibit 1). Dr. Nelson further noted that "similar bad cases and unacceptable average delay times for transfer had been provided at aeromedical meetings quarterly for years with lots of promises but no improvement in service available from HAA."

From a medical standpoint, AirMed can further support that delay in treatment for certain conditions may in many instances result in poor outcomes and continued pain, e.g., blocked arteries to the heart leads to cardiac muscle death, continued hemorrhagic shock results in decreased oxygen to vital organs such as the lungs, and kidneys which could lead to organ failure, unstable complex orthopedic injuries may result in needless loss of limb or long term disability, etc.

AirMed Hawai'i is aware of the initiation of the helicopter service in September 2004 and fully supports the County and State's decision to provide this important component to the emergency 911 system in Maui County. As stipulated in the State of Hawai'i Maui County Emergency MedEvac the service is designed to address the geographical barriers within the county in order to provide timely access to emergency services to the residents of the county. Its primary function is to reduce transport time of the seriously ill or injured to definitive care in the most appropriate acute care facility, generally site and scene evacuations.

The plan also documents the general guidelines for emergency interfacility transfers based in part on the national guidelines of the National Association of EMS Physicians and the American College of Surgeons. These types of transports will only occur when medically necessary and when specific criteria are present, i.e., delay in arrival of fixed-wing aircraft. The plan also states that "Each time the MedEvac is utilized for (interfacility) transfers a 911 emergency ground ambulance crew will be used as the MedEvac medical staff. Their ground ambulance unit and the helicopter will not be available for 911 calls until the transfer is completed."

An additional factor that the applicant believes was taken into consideration in the development of the helicopter plan is the cost effectiveness of interfacility transport; rotor-wing vs. fixed-wing. Using the 2004 Medicare Ambulance Fee Schedule the estimated cost of an interfacility transport by both types of air transport from Maui would be calculated as follows (consider that reimbursement is at 100% using the rural base rates):

p.6

Statute miles from Kahului to Honolulu - 92

	Rotor-wing	Fixed-wing
Aircraft rate: Mileage rate:	\$2,949.91 <u>\$2,494.12</u> @ \$27.11 \$5,444.03	\$2,537.23 <u>\$ 935.64</u> @ \$10.17 \$3,472.87

This illustrates that the most cost-effective method of interfacility transport is by fixed-wing aircraft.

The Maui MedEvac has projected they will perform 125 transports annually (Source: Emergency Application #04-18E). There is obviously no historical data to determine how many of the projected 125 transports would result in an interfacility transport. As previously noted, the total number of patient transports from Maui County by HAA during 2003 was 544. We anticipate minimal impact on the demand for the proposed service needed by the residents and visitors of Maui County based on previous use and projected future utilization of fixed-wing air ambulance. As documented in the helicopter plan, "MedEvac will serve as an adjunct to the existing 911 ground ambulances and is primarily a 911 resource for that system. It is not intended to take the place of existing inter-facility fixed-wing air ambulance transportation." The proposal includes plans to develop a collaborative relationship with all the components of the Maui County EMS system. including the ground and rotor-wing ambulances, with the goal of improving patient outcomes.

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B. The supply of air ambulance service today is non existent. The current provider has not flown since March 8, 2006. The Coast Guard is an option, but it is clearly not their mission and they do not intend to continue providing service indefinitely. The current provider in the past provided service via "... a fleet of (reportedly) five twin engine pressurized fixed-wing Cessna 414A aircraft. They're based in Honolulu, Maui, and Hilo, Hawaii" (pg. 22 HAA, Annual Report, 2003). The total transports (unit of service) during 2003, 2004, and 2005 are shown below (HAA annual reports, 2003, 2004, 2005). HAA lost an aircraft due to a tragic accident, one aircraft remains in the hangar not available for flights. To date, there are three aircraft that would be available when they are cleared to fly. That will still leave a shortage of two aircraft and maybe more due to scheduled maintenance, engine changes, and/or lack of personnel. The number of requests still remain the same or there is a slight increase as seen in number of transports 2005.

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Number of Tran	sports	106 APR -7 P2:06
2003 Total	2473	ST. PLTP. PLNS & DEV. NOTING
AVG/MON	202	
2004 Total	2413	2
AVG/MON	201	XX.
2005 Total	2486	SARINA .
AVG/MON	207	REPLACE RANGE

In addition to the health care needs of the residents, the well being of visitors to Hawai'i is also an important consideration. The tourism industry is recognized as an important part of the state's economic viability. The 2002 Annual Visitor Research Report indicates there were over 6.3 million visitors who arrived by air to the state (DBEDT). Additional DBEDT data indicate that the average daily census of visitors (arrivals by air) in 2002 was 164,572. Of those, just over 50% were located on one of the neighbor islands. The proposal would enhance the confidence level of the tourist population that the State's health care system is capable of providing the level of health care needed in the event of serious illness or injury.

C. The reports from HAA indicate that there has been a deficit between the supply of fixed-wing air ambulance service by the current provider and the demand to meet the health care needs of the residents and visitors in the State, most notably those outside O'ahu. Access to an air ambulance for interfacility transports must be considered in the context of the time during the course of the patient's care and treatment at the initial treating facility and the time when the transport should occur to best meet the needs of the patient. When neighbor island facilities request transports they have recognized that the needs of the patient exceed the availability of the required diagnostic or treatment capabilities of the facility. The time in which certain populations of patients can be transported to definitive tertiary or specialized centers have been shown to have an impact on the eventual patient outcome. Delay in the transport of patients who require urgent care may have a negative effect on patient outcomes in certain patient populations. Delays may also adversely effect the operation of the transferring facility and needs of incoming patients, e.g., unable to move new patients out of the Emergency Department to the ICU bed occupied by a patient who requires transport.

The applicant believes a time period of greater than two (2) hours to reach the transferring facilities local airport should be considered an unreasonable delay (this is when the aircraft is located at HAA's <u>Honolulu base</u>, not the Maui or Hilo locations). This time frame includes preparation of the crews and aircraft as well as flight time to the transferring facilities airport. The rationale for this time frame are as follows:

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Currently, there are no national standards for all patient populations on the amount of time it should take to launch a mission for interfacility transport by fixed-wing air ambulance that is available 24/7 with crew members on-site. However, the American Academy of Pediatrics in its Guidelines for Air and Ground Transport of Neonatal and Pediatric Patients recommends that "...the team should be able to mobilize within a maximum of 45 minutes (preferably within 30 minutes)." Given the similarities between the states as it relates to geographical barriers, the applicant communicated (verbally) with the Director of a fixed-wing air ambulance program in the state of Alaska to determine their current protocol for interfacility transport. Their standard is a launch time of forty-five (45) minutes—the amount of time it takes the crews to prepare from the time the call was received until the door was closed on the aircraft prior to takeoff. They consistently exceed this standard and are usually ready to taxi at thirty (30) minutes.

- In addition to preparation for the transport, the estimated flight times from Honolulu to the transferring facilities were identified. Exhibit 10 documents the flight times from Honolulu to each of the airports on the neighbor islands. The longest estimated flight time is to Hilo, one (1) hour and ten (10) minutes. Given some of the shorter flight times (under one hour), a 2 hour delay is well beyond what would be considered a reasonable length of time to respond to requests for transport. Again, this does not take into consideration the aircraft based in Maui and Hilo (during 2003).
- Hawai`i Air Ambulance

Exhibit 7 represents the "Average Time to Calls" during the defined time period for interfacility transport. The definition of time to calls reported in the HAA monthly reports is a combination of the following times:

- A) Request Time/Flight Request
- B) Time Dispatch/Pilot Notified
- C) Time of Lift Off/Launching Time
- D) Arrive Leg Transferring Facility Airport

The total average Time to Calls for specific facilities on neighbor islands is documented below as documented in the HAA *Annual Report*, 2003 – Data Summary.

	<u>2003</u>	RECEIVED
Hilo Medical Center	2:54	'06 APR -6 A7:52
Kona Medical Center	2:33	1974. FLNG
Maui Memorial	2:48	→ AGENCŸ
Moloka`i General	2:01	
GN Wilcox	2:48	

A comparison of the average time to call between 2003 and 2004 for the months of January through July for all the facilities on each of the neighbor islands are listed below. These Time to Calls data were calculated from the HAA *Annual Report, 2003* monthly reports and the HAA 2004 Monthly Reports.

	<u>2003</u>	<u>2004</u>	Percent Change
Hawai`i	2:55	5:07	> 75%
Maui	2:48	3:19	> 41%
Moloka`i	2:05	3:53	> 86%
Lana`i	2:21	5:03	> 115%
Kaua`i	3:18	5:19	> 61%

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Obviously there are circumstances when multiple calls from different islands are received during the same time period (peak hours) and aircraft may not be readily available. The same can be said for the days of the week expected to require the greatest number of transports. There would also be periods of time when an aircraft is grounded for preventive maintenance. From an operational standpoint the proposal will take these issues as well as others into consideration to meet the needs of the residents served.

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Fixed-Wing Air Ambulance

The total transports over the past five years as reported in the HAA, *Annual Report,* 2003-Data Summary and the percentage of change are as follows (percentage of change was calculated by the applicant).

	Number of Transports	Percent Change
<u>1999</u>	1915	
<u>2000</u>	2050	> 7.1%
<u>2001</u>	2115	> 3.2%
<u>2002</u>	2364	> 7.1%
2003	2473	> 3.6%

The average percent increase over the past four years was 5.25 percent. The *Annual Report* also documents that the average total transports per month increased from one hundred and fifty-three (153) in 1999 to two hundred and two (202) in 2003, an increase of 32 percent.

Additional review of the annual transports and their relationship to the neighbor island acute care admissions was performed. Using the annual number of HAA transports and neighbor islands acute care admissions, the percentage of patients that required interfacility transport was determined over the past four years.

<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
5.0%	5.4%	5.3%	5.6%

These figures have remained relatively stable; the four year average is 5.3 percent. The data presented demonstrate that there has been a consistent utilization of fixed-wing air ambulance over the past five years with no indication that the trend for increased utilization will not continue in the same manner in the future.

Resident & Visitor Population

Residents

An important factor to consider in relation to the health care needs of any state's population is the current and projected number of residents. The most recent U.S. Census in 2000 lists the population of Hawai'i at 1,211,537. The number of residents 19 years of age and under represents 27.1 percent of the population, and aged 55 and above 22 percent. According to the DBEDT 2020 projections the resident population is anticipated to rise an average of 1.0 percent annually.

The projections also indicate that Hawai'i's population is also expected to undergo significant structural changes in the future. The report indicates that "... the aging of the baby boom generation and a generally increasing life span will add significantly to the population aged 55 and over by 2020." The share of the population 55 or older will rise from 20 percent to 30 percent over the same period. "Moreover, more than 18 percent of the population will be 65 or older in 2020, compared with 13 percent in 1995."

The H2P2 documents the impact of the aging population and the expected increase in utilization of health care resources and services within the State. The percentage of the younger population, neonates, pediatric and adolescents, will also continue to impact the health care system statewide.

The primary residence of Hawai`i's population is an additional factor of great importance in relation to the distribution of health care resources and access to providers of health care. Historically, the most populous island in the State has been O`ahu with no indication that this will change in the future. However, the population of the neighbor islands has shown significant increases over the past thirty years, most notably on the Big Island, Maui, and Kaua`i. Over 330,000 residents reside on one of the neighbor islands and represents 28 percent of Hawai`i's population.

The need for access to tertiary and specialty care and services is essential to meet the health care needs of these and other residents, regardless of their location in the State. The proposal would assist in providing access to these facilities when necessary.

Visitors

Visitors to Hawai`i also has an impact on the population of the State on any given day. According to the DBEDT 2002 Annual Visitor Research Report there were 6,452,834 visitors to the State in 2002, up 4.1 percent compared to 2001. The average daily census (arrivals by air) for the state is 164,572, an increase of 14 percent of the total population. Slightly over 50 percent of these visitors are located on one of the neighbor islands.

Average Daily Visitor Census

O`ahu

82.121

Tri-Isle

42,742 (95% Maui)

Kaua`i

17,432

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Hawai`i 22,277 The continued expansion of Hawai'i's cruise ship industry also resulted in a total of APR -6 242/144 passengers aboard cruise ships touring the islands during 2002—235,027

ST. HLTH. 17 The projected number of residents and visitors will have an impact on the entire health care system of Hawai'i. These data also have implications for the increased need of the neighbor islands to access the tertiary and specialized care facilities and services in O'ahu in the future. REPLACEMENTPAGE

were from out of state which was an increase of 52.6 percent from 2001.

- Summary of Projected Utilization
 - Based on the review of data, it is estimated that the future utilization of the service would increase an average of 5% each year. The number of interfacility transports during the base year of operation is expected to be 365. The projected increase in transports for the subsequent years are as follows: 383 for year two, 403 for year three, and 424 during the fourth year of operation. The applicant is willing to increase services as dictated by the need and demand for the service by the residents and providers of health care in the State.
- AirMed Hawai`i services will be accessible to all residents and visitors to Hawai`i. including the elderly, low-income persons, racial and ethnic minorities, women. persons with disabilities, and other underserved groups

SECTION C: QUALITY CRITERIA

Quality of Care

A. In addition to providing necessary fixed-wing interisland medical air transport service in the face of a state of emergency where no regular service currently exists (and where the service level of the currently licensed operator is inadequate even when and if it returns to operations), it is important to note that service level proposed is of the highest caliber from an operator with a proven track record and ample resources. The proposed service will improve the quality of care by providing a high quality, well-equipped, well-staffed and welltrained fixed-wing air ambulance service for the residents and visitors of Hawai'i. The current provider is not operational since March 8, 2006, and apparently still has not been cleared to resume operations by the FAA. Even prior to this date, however, the demand for interfacility transport has exceeded

the current provider's ability to supply the service in a timely and efficient manner. The proposed service will assist in supplying transport resources to those who require access to the tertiary and specialty care facilities on O`ahu.

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AirMed Hawaii, LLC will have the resources of AirMed International (see attachment 4 to application). AirMed International (AMI) prides itself on the high quality of service it has provided over the years. As Chapter 1 of the H2P2 so aptly states, "Quality goes beyond simply the assurance of a minimum acceptable level of quality to the continuous improvement of the overall, or average, performance of individuals and organizations". AMI is a FAA certified air carrier with worldwide operating authority. Its flight department consists of ATP Certified flight crews with our long-range aircraft crews having a minimum of 4000 flight hours with 2000 of those hours involving multi-engine operations. All AMI pilots complete simulator training annually and are type-specific rated (all seats); flight crews are qualified in no more than two aircraft at a time. AirMed pilots complete one of the two required first-class flight physicals at the Mayo Clinic in Rochester each year. AMI's accreditation by the Commission on Accreditation of Medical Transport Systems (CAMTS) is evidence of a commitment to high standards of quality care and service. CAMTS accreditation is recognized as the industries "gold standard" indicating the programs delivery of high quality of care and service. AMI's in-house dispatch center employs FAA Part 121 licensed dispatchers. AMI's maintenance department personnel consist of A & P licensed mechanics that have completed aircraft specific factory training. These professionals are required to release the aircraft for each flight and accept the aircraft upon return.

AirMed's medical communications center, staffed with emergency medical technicians or nurses, have access to advanced practice nurses and/or physicians on a 24/7 basis 365 days per year. We offer three levels of medical staffing for transports utilizing various combinations of medical personnel who are MD's, RN's, and RT's. The ability to routinely provide physicians is particularly important for some of our overseas transports. AirMed's medical teams have critical care experience in a wide variety of specialties that may be required for adult, pediatric, and neonatal transports. AirMed retains disclosed professional liability limits of \$1 million per claim and \$3 million aggregate. Our highly experienced flight and medical crews are accustomed to the intricacies of providing long distance transports, completing over 9000 missions, in over 150 countries on six continents. Over the past two years, AirMed has flown to more than 125 foreign destinations on five continents, visiting 56 of those within the past twelve months.

As previously described, optimal patient outcomes occur when the continuum of care is maintained and the appropriate level of care and services are accessible to the patient. As is the practice across the U.S., when the health care needs of the seriously ill or injured patient exceed the capabilities of the local resources, transfer to a tertiary or specialty care facility is indicated. Following the initial

medical management of the patient, the time to definitive care has been shown to be an extremely important factor to ensure optimum patient outcomes. A large number of patients who have required transport had time-sensitive conditions as evidenced by past transport data. The proposed service will improve quality of care by providing air transport to those in need of further definitive care with the knowledge that those patients with urgent needs must take priority.

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The proposed service will also improve quality of care by ensuring highly skilled health care professionals specially trained in fixed-wing air transport are health care professionals specially trained in fixed-wing air transport are service. Not only will the patient care team have the skills and equipment to provide the necessary care, they will be capable of responding to the anticipated complications that may occur, and do so safely in the given transport environment.

The proposed service will follow the revised Hawai'i Administrative Rules, Title 11, Chapter 72 that specify the standards for medical personnel, equipment and supplies. The service provider will also ensure that the quality of care is maintained by adhering to the requirements for interfacility transfer in accordance with the Consolidated Omnibus Reconciliation Act/Emergency Medical Treatment and Labor Act (COBRA/EMTALA).

B. AirMed Hawai'i is committed to the maintenance of high quality standards of patient care, safety, and operational excellence. One of the essential components of the proposal is the establishment of a continuous quality improvement (CQI) program to monitor, evaluate and improve the performance of our air ambulance service. The CQI process will emphasize a continuous multidisciplinary effort (administrative, medical, and aviation) to measure, evaluate, and improve both the *process* of care and service, and the *outcome*. It will also seek to systematically, objectively, and continuously monitor, assess, and improve the quality and appropriateness of patient care provided according to predetermined standards. All the components of the service will also be monitored for effective, consistent, safe, and state-of-the-art care. This same methodology will encompass the other essential elements of the program, i.e., flight, maintenance and administration.

AirMed has met or exceeded the standards to be have the following certificates:

- Commission on the Accreditation of Medical Transport Systems (CAMTS) Standards
- Federal Aviation Administration regulations under Part 135
- Department of Defense
 We will obtain licensure from:
- Hawai`i State Department of Health State Emergency Medical Services (EMS)
 - We further insure quality by following standards published by the following agencies:

■ National Medical Organizations (for air transport and clinical best practice/evidence-based guidelines): American College of Surgeons Committee on Trauma (ACS COT), National Association of EMS Physicians (NAEMSP), American Academy of Pediatrics (AAP), Air & Surface Transport Nurses Association (ASTNA), Air Medical Physician Association (AMPA), National Flight Paramedics Association (NFPA), American College of Critical Care Medicine and the Society of Critical

American College of Critical Care Medicine and the Society of Critical

Of APR -6 A7 Gare Medicine, Association of Air Medical Services (AAMS), American
Heart Association, National EMS Pilots Association (NEMSPA),

American College of Obstetricians and Gynecologists (ACOG)

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As mentioned above, the two categories used to measure performance are the quality of process and outcomes. Examples of process measures include:

- Compliance with guidelines, protocols, and procedures
- Timeliness and availability of service
- Appropriateness of transfer
- Error in judgment, communication, or treatment
- Appropriateness and legibility of documentation
- Populations served

Examples of outcome measures include:

- Mortality
- Morbidity
- Length of patient care time
- Cost
- Patient satisfaction

The proposed transport program will continually strive to improve and promote safe quality patient care.

C. AirMed Hawaii, LLC will be managed by Sandy Apter, who will serve as its Vice President and General Manager. Mrs. Apter has over 23 years experience in successfully administering an air ambulance operation in Hawaii and is highly respected in the local medical community. Moreover, AirMed Hawai`i's sister company, AirMed International, LLC, operates a similar fixed-wing air ambulance program and the administrative and professional staff of AirMed International will be available to assist in management of the operations of AirMed Hawaii.

AirMed International (AMI) has always maintained that quality patient care of the highest standard be an essential goal of the transport program. AMI's commitment and demonstration of continuous quality care is validated by our accreditation by the Commission on Accreditation of Medical Transport Systems (CAMTS). CAMTS accreditation is considered the air medical transport industry's "gold standard" as it relates to quality patient care and operational excellence. Accreditation is a voluntary process in which an

accrediting board of experts evaluates a program against measurable standards or criteria. The CAMTS has established the standards as a "blueprint for organizational planning" and marker of excellence.

RECEIVE July 2004 AMI received full reaccredidation by CAMTS for the third time. The AMI Honolulu base, opened in February 2004. In its deliberation, the Board recognized several areas of excellence and areas of acknowledgement within APR -6 the service. Here in part, are a few of their comments:

- The service has obvious financial commitment by administration.
- ST. HLTH. FLHG * & DEV. AGENCY* The Director of Maintenance has an extensive tracking system...
 - The satellite GPS tracking system is impressive...
 - It was evident that all of management demonstrates a commitment to the program, investing a great deal of personal time and energy.

Members of AMI management team were requested to speak at the annual 2004 Air Medical Transport Conference by the Executive Director of CAMTS. The topics included "Preparing for Accreditation" and "Innovative Ways to Meet the Accreditation Standards". The latter topic was a presentation of one of AMI program attributes that was selected as an example of some of the best practices seen by CAMTS site surveyors that demonstrate innovative ways to meet accreditation standards in typical problem areas.

CAMTS accreditation is considered an honor within the industry and represents external validation of AirMed International's on-going commitment to quality and safety. This same commitment will be carried over into the proposed operation to ensure that the standards of care are maintained at the highest level.

2. Staffing

A. The proposed service will be staffed for continuous service, 24 hours per day, 7 days per week, 365 days per year utilizing Hawai'i based and licensed emergency and/or critical care experienced nurses and licensed experienced Mobile Intensive Care Technicians.

All flights will be staffed with a minimum of one flight nurse and one flight MICT providing medical coverage for each flight—2:1 ratio. Additional medical professionals may be added as required by patient condition.

- B. Medical personnel must hold the following qualifications and/or training:
 - 1) Valid license to practice in the State of primary practice (Hawai'i)
 - 2) Active in the care of critically ill patients

- Successful completion of, or equivalent education in Advanced Cardiac Life Support (ACLS) or age specific Life Support Sponsored by the American Heart Association.
- 4) Successful completion of, the Advanced Trauma Life Support (ATLS) sponsored by the American College of Surgeons or equivalent education/training
- 5) Successful completion of the AirMed Transport Orientation
 - a) AirMed Administrative Policies
 - i) Specific Job Descriptions / Requirements
 - ii) Orientation Requirements
 - iii) Pay Scale and Schedule
 - iv) Staffing Schedule
 - v) Competencies
 - vi) Dress Code
 - b) AirMed Mission
 - i) Mission Statement
 - ii) Scope of Practice
 - iii) Patient Population Definitions
 - c) AirMed Policy and Procedures
 - i) Medical Standing Orders
 - (1) Disease-specific protocols
 - (2) Age-specific protocols
 - ii) Safety
 - (1) Aircraft Safety
 - (2) Patient / Flight Crew Safety
 - iii) Infection Control
 - (1) Blood Borne Pathogen Exposure
 - (2) Immunizations
 - iv) Disaster Plan
 - v) Diversion Policy
 - d) Medical Record Components and Required Documentation
 - Review of Chart Components
 - ii) Review of Chart Distribution
 - e) Transport Procedures
 - i) Pre-flight Inventory and Checks
 - ii) Ground Transport Procedures
 - (1) Required equipment to be taken from aircraft
 - iii) In-Flight Procedures
 - iv) Communication during transport
 - v) Medical Control
 - vi) Post-flight Inventory and re-stock
 - f) Medical Equipment Orientation
 - i) Operations
 - ii) Trouble-shooting
 - iii) Orientation to Supply area
 - iv) Orientation to Medical Packs

- v) Orientation to Aircraft / Stretcher Configuration
- vi) Orientation to Stretcher and Medical Package
- vii) Loading and Unloading of Stretcher and/or Isolette
- g) Quality Assurance Policy
 - i) Indicators Monitored
 - ii) Process
 - iii) Reporting
- h) Altitude Physiology
 - i) Flight Effects / Physiology
 - (1) Human Sub-systems
 - ii) Specific Interventions regarding flight effects
 - iii) Stresses of flight
- i) Crew Resource Management
- Successful completion of annual advanced skills training (based on scope of practice)
 - a) Airway
 - i) Oral Intubation
 - ii) Nasotracheal Intubation
 - iii) Needle Cricothyrotomy
 - iv) Surgical Cricothyroidotomy
 - v) Airway Adjuncts
 - vi) Ventilator Management
 - b) Chest Tube
 - i) Needle Thoracostomy
 - ii) Chest Tube Insertion
 - iii) Chest Tube Drainage Systems
 - c) IV Access
 - i) Peripheral and Central Access
 - ii) External Jugular Cannulation
 - iii) Internal Jugular Cannulation
 - iv) Subclavian Triple Lumen
 - v) Femoral Vein Cannulation
 - vi) Other peripheral sites
 - d) Arterial Puncture
 - i) Arterial Line Placement
 - ii) Arterial/Line Monitoring
 - iii) Arterial Blood Gases
 - e) Cardiac Monitoring/Management
 - i) Defibrillation
 - ii) AICDs
 - iii) Synchronized Cardioversion
 - iv) Noninvasive Pacing
 - v) Temporary Invasive Pacing
 - vi) Pericardiocentesis
 - f) Neurological Assessment/Management
 - i) Neuro Checks

REPLACEMENT PAGE

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ii) ICP Management/Monitoring

- 7) Approval of the Medical Director and/or Vice President of Medical Services after demonstration of proficiency in air medical transport during a probationary period to be determined
- C. Training and education are provided to staff during the initial general orientation, periodic in-services as needed, and annual clinical competency evaluation. Continuing education (CE) will be based on state licensure requirements for each discipline.

of APR -6 A752 requirements for eac 3. Licensures and Certificates & DEV. AGENCY

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The following certificates and licenses are required for this proposal:

- Certificate of Need
- Hawai`i Business License
- Hawai'i EMS Air Ambulance License (application to be made upon CON approval)
- Medicare and Medicaid certification (application to be made upon CON approval)
- Federal Aviation Administration (AirMed International has these certificates):
 - Air Carrier Certificate
 - Federal Aviation Regulation Part 135 with Air Ambulance Operations Specifications Approval
 - o Federal Aviation Regulation Part 91

Though not required, AirMed Hawai'i will seek accreditation by CAMTS following the first twelve (12) months of operation. CAMTS requires that a program be in operation for one year and able to submit one full year of statistics. Again, the applicant feels strongly that CAMTS accreditation ensures the industry standard for patient care and safety are being met. Until accreditation is received, the program will strive to meet or exceed CAMTS standards.

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4. Memberships and Affiliations

AirMed Hawai'i will seek membership in the Association of Air Medical Services.

SECTION D: COST AND FINANCIAL CRITERIA

This proposal meets all applicable cost and financial criteria as specified in HAR 11-186-15. The proposal will not adversely impact the overall cost of health services to the community because AirMed Hawaii intends to charge the same as the existing air ambulance provider and accept reimbursement from existing rates established by insurers.

Furthermore, the long-term financial feasibility of the proposal is assured. AirMed Hawaii (AMH) will have full support and resources of AirMed International (AMI) as shown by the letter of commitment from AMI (attachment 4 to application). The Balance Sheet of AMI, which is attached following the Executive Summary, amply demonstrates the significance of this support as AirMed International has \$14.5M in assets, including over \$2M in cash. Aircraft and medical equipment necessary for AMH's operation will be leased by AMI, which currently operates two (2) 800 Hawkers. one (1) Cessna Citation II, and one (1) King Air C90 that are permanently configured APR -6 A7 as airborne intensive care aircraft. Of these, one Hawker and one Citation are owned by AMI, while one Hawker and one King Air are leased on a five-year triple net lease ST. HLTH. FLR with three years remaining on each lease. AMI will reallocate existing aircraft on an a DEV. AGEN interim basis; therefore, no financing or aircraft acquisitions will be required to commence startup operation in Hawaii. Because of AirMed's credit history our existing lessor has agreed to lease AirMed additional King Airs for Hawaii operations. or, alternatively AirMed International may consider outright purchase of these aircraft.

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The Operational Forecast attached following the Executive Summary demonstrates that with conservative estimates of patient transports, the operation will be financially stable and AMH should not have difficulty in continuing operations at a high level of quality. REPLACEMENT PAGE

SECTION E: RELATION TO THE EXISTING HEALTH CARE SYTEM CRITERION

- A. A deficit has existed in the health care delivery system of Hawai'i in relation to interfacility patient transfers to the State's tertiary and specialty care facilities. particularly for the neighbor island residents and visitors. The need and demand for fixed-wing air ambulance services for interfacility transports has exceeded the current providers ability to supply this critical service and now that provider is out-of-service completely since a fatal crash on March 8 of this year. Even if and when Hawaii Air Ambulance resumes operations, clearly there is not sufficient equipment and personnel to provide for the needs of the State of Hawaii for rapid transport of critically ill patients to centers of advanced levels of care on Oahu. The proposal will assist in improving this gap in service by providing additional resources to the health care delivery system to meet the needs of the community.
- B. The current health care system has generally been meeting the majority of the health care needs of the population of Hawai'i through the provision of care in local health care facilities. However, when the needs of the high-risk patient exceed the capabilities of the local facility, transfer to an appropriate facility is

indicated. There is a relative disparity in the availability of the therapeutic and diagnostic capabilities located in tertiary medical centers for a small percentage of the population with high-risk conditions—especially for the neighbor islands population.

RECEIVED The proposal will also assist in freeing up beds in the transferring facility.

- *06 APR -6 A7 5 The proposed fixed-wing air ambulance service will assist in improving the availability of local facility resources and essential specialty services necessary to meet the health care needs of this patient population and optimize patient at the health care needs of this patient population and optimize patient outcomes.
 - C. Access to the specialty and regional centers on O'ahu without delay, predominantly for the neighbor island residents, is an important factor in ultimate patient outcomes. Delays in receiving definitive care have been shown to contribute to death and disability. Past and current data demonstrate that delays in accessing regional facilities by fixed-wing air ambulance are common, and indicate that the current provider is unable to meet the demand for timely access to these critical services. The proposal will assist in providing timely access to these facilities to meet the community's health care needs and maximize the potential for optimal patient outcomes.

The proposed service will augment the services currently being provided by Hawaii Air Ambulance by offering an additional fixed-wing air ambulance provider in the State of Hawai'i. It will also act as an adjunct to the rotor-wing and ground ambulances on the neighbor islands. Our intent is not to disrupt the operation of the current aeromedical service providers, but to strengthen and enhance the health delivery system of Hawai'i.

SECTION F: AVAILABILITY OF RESOURCES CRITERION

Financial: AirMed Hawaii (AMH) will have full support and resources of AirMed International (AMI) as shown by the letter of commitment from AirMed International in Documentation section. The Balance Sheet of AMI, which is attached following the Executive Summary, amply demonstrates the significance of this support as AirMed International has \$14.5M in assets, including over \$2M in cash.

Aircraft and Equipment: Aircraft and medical equipment necessary for AMH's operation will be leased by AMI, which currently operates two (2) 800 Hawkers, one (1) Cessna Citation II, and one (1) King Air C90 that are permanently configured as airborne intensive care aircraft. Of these, one Hawker and one Citation are owned by AMI, while one Hawker and one King Air are leased on a five-year triple net lease with three years remaining on each lease. AMI will reallocate existing aircraft on an interim basis; therefore, no financing or aircraft acquisitions will be required to commence startup operation in Hawaii. Because of AMI's credit history its existing

lessor has agreed to lease AirMed additional King Airs for Hawaii operations, or, alternatively AirMed International may consider outright purchase of these aircraft.

Staffing: We have interviewed and will hire three full time nurses and sufficient paramedics (MICT'S) on a part-time basis to equal 3.0 FTE MICTs, which will provide initial medical staffing of the jet (Hawker) on a 24/7 basis. Existing pilots from AMI will staff the Hawker during startup. Four full-time Hawaii based pilots have already committed to AirMed Hawaii for operation of the King Air aircraft. These four pilots will attend flight safety training and ground school during the initial start-up period while the jet is based here so that they will be available to fly as soon as the King Air planes arrive. In addition, backup piloting and medical crews are available as needed from AMI.

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